## c.) Amendments to the Claims

## **Status Identifiers of the Claims**

- 1. (Currently amended)
- 2. (Currently amended)
- 3. (Currently amended)
- 4. (Currently amended)
- 5. (Currently amended)

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- 6. (Withdrawn)
- 7. (Withdrawn)
- 8. (Withdrawn)
- 9. (Withdrawn)
- 10. (Withdrawn)
- 11. (Withdrawn)
- 12. (Withdrawn)
- 13. (Withdrawn)
- 14. (Withdrawn)
- 15. (Withdrawn)

## **Listing of Claims**

- (currently amended): A de novo synthesized plasmid without referring an existing
  plasmid as a template comprising at least a replication origin and a selection marker
  gene wherein;
  - (a) the replication origin contains sequences relevant to causing autonomous plasmid replication in a host cell; and
  - (b) the selection marker gene contains sequences relevant to causing the selection of a plasmid in a host cell.
- 2. (currently amended): The plasmid according to claim 1, wherein the plasmid is not modified synthesized from the an existing plasmid previously obtained from natural sources as a template.
- (currently amended): The plasmid according to claim 1, wherein the plasmid is not modified synthesized from the an existing plasmid previously obtained from recombinant sources as a template.
- 4. (currently amended): The plasmid according to claim 1, wherein the replication origin allows allowing the autonomous plasmid replication in a host cell is from natural or recombinant sources.
- 5. (currently amended): The plasmid according to claim 1, wherein the selection marker gene encodes encoding a product indicative of plasmid maintenance in a host cell is from natural or recombinant sources.
- 6. (withdrawn): A method of preparing a de novo synthesized plasmid combined from at least two DNA fragments comprising:

- (a) preparing a linear replication origin DNA fragment;
- (b) preparing a linear selection marker gene DNA fragment;
- (c) combining the DNA fragments prepared from steps (a) and (b) to form a circular de novo synthesized plasmid;
- (d) introducing the plasmid made from step (c) into a host cell; and
- (e) selecting the plasmid with appropriate replication origin and selection marker from transformed host cells.
- 7. (withdrawn): The method according to claim 6, wherein any DNA fragment alone used for combining the de novo synthesized plasmid cannot confer both autonomous DNA replication and selection to a plasmid.
- 8. (withdrawn): The method according to claim 6, wherein the linear DNA fragments of steps (a) and (b) are prepared from polymerase chain reaction.
- 9. (withdrawn): The method according to claim 6, wherein the linear DNA fragments of steps (a) and (b) are prepared from restriction digestion.
- 10. (withdrawn): A method of using a de novo synthesized plasmid comprising:
  - (a) Linearizing the de novo synthesized plasmid;
  - (b) inserting one or more functional DNA fragments to the linearized plasmid to make other plasmids;
  - (c) introducing the plasmids made from step (b) into host cells;

- (d) selecting the plasmids and host cells with desired properties; and
- (e) using the plasmids and host cells for biomedical applications.
- 11. (withdrawn): The method according to claim 10, wherein linearizing the plasmid was achieved by restriction digestion.
- 12. (withdrawn): The method according to claim 10, wherein linearizing the plasmid was achieved by PCR.
- 13. (withdrawn): The method according to claim 10, wherein the functional DNA fragments encode a promoter, a regulatory sequence, a ribosome binding site, restriction sites, a terminator, a polypeptide, a replication origin, and a selection marker gene.
- 14. (withdrawn): The method according to claim 10, wherein the desired properties are plasmid replication, selection, and the properties added by functional DNA fragments inserted from step (b).
- 15. (withdrawn): The method according to claim 10, wherein the biomedical applications are DNA cloning, DNA amplification, gene expression, gene therapy, and DNA immunization.